

### 26th June, Morning

#### Session 1 - Lessons Learned from WFD application

Chair Room	Rui Rodrigues Auditorium		
Room	Nº	Title	Author
11.00-12.30	234	Water availability, scarcity and quantitative pressures in the Portuguese national water plan	<u>Francisco Freire de Carvalho</u> , João Almeida
	220	Water resources and spatial planning systems in Portugal – using Ria de Aveiro as a model to explore better synergies	<u>Teresa Fidélis</u> , Peter Roebeling
	196	Analysis of Water prices in Urban Systems: Experience from Three Basins in Southern Portugal	Catarina Roseta Palma, <u>Henrique Monteiro</u> , Pedro Bettencourt Coutinho, Pedro Afonso Fernandes
	209	The Water Framework Directive and state of Europe's water	<u>Peter Kristensen</u> , Anne Lyche Solheim, Kari Austnes
	252	Water Framework Directive Implementation on Hydroelectric Power Schemes - The Case of EDP	Elisa Maria Almeida Azevedo Bragança Branco, Ulisses Manuel Cunha Cabral, <u>Ana Patrícia Goulã Carreto</u> , Sara Miranda Figueiredo
	181	Assessing adaptation options to water scarcity in Southern Spain. An approach combining multi-criteria analysis and land-use optimization	Silvestre Garcia De Jalon, <u>Ana Iglesias</u> , Ruth Cunningham, Juan Ignacio Pérez Díaz
	307	The Portuguese-Spanish cooperation on transboundary water governance: The way forward	António G. Brito, Rodrigo Maia, Cristina Silva, Theo Fernandes, Manuel Lacerda

#### Session 2 - Adaptive IWRM and New Paradigms

Chair Room	Alberto Garrido Room 3		
Room	Nº	Title	Author
11.00-12.30	155	Mainstreaming ecosystems' sustainable decision-making: How to ensure the accurate integration of ecological and socio-economic targets within a Decision Support System?	Rute Pinto, <u>Maria da Conceição Cunha</u> , Catarina Roseta-Palma, João Carlos Marques
	144	Integrated water management for Southern Europe: a joint action plan	<u>Gilberto Martins</u> , Regina Nogueira, Luciana Peixoto, Daniel Ribeiro, Alexandrina Rodrigues, Teresa Tavares, Macarena Ureña, Daniel Fernández, Francisco J. Luque, César Alcácer, António G. Brito
	55	Fuzzy optimization for irrigation planning with minimization of cost of cultivation	<u>D. G. Regulwar</u> , Jyotiba B. Gurav
	171	A Two-stage interactive fuzzy ranking interval linear programming (T-IFRILP) for water resources planning under uncertainty	<u>Lei Jin</u> , G. H. Huang, Li Wang, Donna Usher
	29	A decision support system for groundwater sustainability in the Arid Eastern Abu Dhabi Emirate: The water budget model	<u>Mohamed Mostafa Mohamed</u>
	239	Adaptation challenges in complex river basins around the world	<u>Roger Pulwarty</u> , Rodrigo Maia
	75	End-use forecasting in the context of building adaptive water services	<u>Pierre Mukheibir</u> , Thomas Boyle, Cynthia Mitchell

### 26th June, Afternoon

#### Session 3 - Droughts and Water Scarcity

Chair Room	Antonino Cancelliere Auditorium		
	Nº	Title	Author
14.30-16.00	231	Assessing the effectiveness of preventive measures for droughts - issues and solutions	<u>Alberto Garrido</u> , Fabio Farinosi, Marina Gil, Stefan Görlitz, Claudia Grambow, Nuria Hernandez-Mora, Eduard Interwies, Jaroslav Mysiak, Caroline Van Bers
	68	Water resource allocation in critical conditions: a Bankrupt Games approach	<u>Giovanni M. Sechi</u> , Riccardo Zucca
	132	Assessing drought vulnerability under alternative water demand deficits scenarios in South-Eastern Europe	Christos A. Karavitis, Stavros G. Alexandris, Vassilia P. Fassouli, Demetrios V. Stamatakos, Constantina G. Vasilakou, Demetrios E. Tsesmelis, Nikolaos A. Skondras, Gregor Gregoric
	296	European Dryness and Wetness in the last decade with the Empirical Standardized Precipitation Index	<u>S. Russo</u> , H. Carrao, A. Singleton, P. Barbosa, A. Dosio, J. Vogt
	53	Energy intensity of decentralised water supply systems utilised in addressing water shortages	<u>Raymond Siems</u> , Oz Sahin, Mohammad Reza Talebpour, Rodney Stewart, Michael Hopewell
	34	Towards a comprehensive evaluation of measures for combating water scarcity	George Tsakiris, <u>Mike Spiliotis</u> , Harris Vangelis, Panagiotis Tsakiris
	230	Causal loop diagram for groundwater protection strategy in drought conditions: the case of the Apulia region	<u>Raffaele Giordano</u> , Michele Vurro

#### Session 4 - Risk Management Oriented Approach

Chair Room	Nilgun Harmancioglu Room 3		
	Nº	Title	Author
14.30-16.00	147	Relationship between the North Atlantic oscillation and the occurrence rates of floods. Some case studies in Northern Portugal	<u>Artur Tiago Silva</u> , Maria Manuela Portela, and Mauro Naghettini
	187	Managing drought economic effects through insurance schemes based on local water availability	<u>Jorge Ruiz</u> , María Bielza, Alberto Garrido, Ana Iglesias
	134	Systemic flood risk assessments by application of multivariate statistics	Andreas H. Schumann, <u>Markus Schulte</u>
	85	Risk-based water resources planning: challenges for reaching rational decisions based on quantitative frameworks	<u>Sean Turner</u> , Paul Jeffrey
	140	Deriving bivariate flood frequency distributions for dam safety evaluation	<u>Isabel Flores</u> , Ana Requena, Álvaro Sordo-Ward, Luis Mediero, Luis Garrote
	102	Optimal design for flood limit water level of cascade reservoirs	<u>Shuo Ouyang</u> , Jianzhong Zhou, Chunlong Li, Xiang Liao, Hao Wang
	206	Implications of climate variability and future trends on wheat production and crop technology adaptations in southern regions of Portugal	<u>Mário Carvalho</u> , Ricardo Serralheiro, João Corte Real, Pedro Valverde

### 26th June, Afternoon

#### Session 5 - Floods Directive and Applications

Chair Room	Athanasios Loukas Auditorium		Author
	Nº	Title	
16.30-18.00	151	The implementation of floods Directive on Portugal: problems on the definition of floods-probe areas and vulnerability	<u>Inês Marafuz</u> , Pedro Gonçalves, Carlos Bateira, Alberto Gomes
	94	Deciphering the floodplain inundation maps in Greece	<u>Dionysia Panagoulia</u> , Nikos Mamassis, Alexandros Gkiokas
	39	The effect of four new floodgates on the flood frequency in the Dutch Lower Rhine Delta	<u>Hua Zhong</u> , Peter-Jules Van Overloop, Pieter Van Gelder, Xin Tian
	218	Multi-criteria analysis framework for mapping of potential flood prone areas	<u>George Papaioannou</u> , Athanasios Loukas, Lampros Vasiliades
	236	Advanced Hydroinformatic Tools for Floods Simulations at River Lima Basin	<u>José Pinho</u> , Rui Ferreira, Luís Vieira, Dirk Schwanenberg
	18	Flood simulation and estimation of agricultural flood loss in ArcGis environment using Python	<u>Anthi-Eirini K. Vozinaki</u> , Nektarios N. Kourgialas, George P. Karatzas, Ioannis A. Sibetheros
	150	Implementing the Floods Directive: uncertainties in damage modelling	<u>Anna Rita Scorzini</u>

#### Session 6 - Water and Energy

Chair Room	José Ferreira Lemos Room 3		Author
	Nº	Title	
16.30-18.00	174	Salinity gradient energy: a new source of renewable energy for Australia	<u>Fernanda Helfer</u> , Yuri Anissimov, Charles Lemckert, Oz Sahin
	80	Multi-objective artificial bee colony algorithm for long-term scheduling of hydropower system: a case study of China	<u>Xiang Liao</u> , Jianzhong Zhou, Shuo Ouyang, Rui Zhang, Yongchuan Zhang
	245	Advanced energy recovery strategies for wastewater treatment plants and sewer systems using small hydropower	<u>Viktoria Berger</u> , André Niemann, Torsten Frehmann, Heinz Brockmann
	251	Water resources management in an Electricity Market environment	Henrique Lobo Ferreira/ <u>Berto Martins</u>
	284	River canals downstream hydropower schemes	Vitor Ribeiro, <u>Pedro Neves Pinto</u>
	285	Hydraulic-operational safety assessment of EDP dams in Portugal. Current status.	Manuel Oliveira, Miguel Oliveira, <u>Irene Fernandes</u> , José Dias Silva
	128	Exploring the potential of micro hydropower systems in urban water supply systems. Decision-making and optimum management using harmony search	Ioannis Kougiyas, <u>Thomas Patsialis</u> , Antigoni Zafirakou, Nicolaos Theodossiou